

amount of oxygen available to it. This aim may be rationally achieved with a regimen that includes fluid restriction, hyperventilation, barbiturate-induced sedation, muscle relaxation, administration of steroids, and reduction of core temperature to $30 \pm 1^\circ\text{C}$.⁶

In our opinion active rewarming should be restricted to the exceptionally few cases in which it is impossible to restore sufficient circulation in hypothermia even though sufficient medical measures have been taken, including correction of acidosis. It should be recalled that the appropriate doses and the effects of drugs are influenced by hypothermia.² If, however, rewarming is indicated, we agree that it should be performed as a central rewarming with use of ventilation with heated, humidified oxygen/air, peritoneal lavage with warm fluids, or as we would prefer, rewarming during extracorporeal circulation.

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ORAL ELECTROLYTE SOLUTIONS FOR INFANTILE DIARRHEA

To the Editor: In a letter in the May 14 issue,¹ Dr. Walker states that fluids prescribed for ingestion during typical episodes of diarrhea in the United States should contain less than 17 mmol of sodium per liter, and that oral rehydration solutions containing 80 to 90 mmol of sodium per liter, similar to the solution recommended by the World Health Organization (WHO), should only be administered under direct supervision (implying a hospital setting).

We disagree with both these statements. We also disagree with the implication that solutions containing 80 to 90 mmol of sodium per liter have been used only under close supervision in underdeveloped communities. Such solutions have been used safely in outpatient clinics and community-based programs in many developing countries.²

There has also been considerable experience in the United States with home-based treatment of acute gastroenteritis with oral rehydration solutions similar to the one recommended by the WHO. Since studies were conducted in 1973,^{3,4} the Public Health Service Indian Hospital in the Fort Apache Reservation in Arizona has continued to use solutions with 90 mmol of sodium per liter in both hospitalized and ambulatory patients with diarrhea. One of us (K.J.), has used this solution there since 1976. More than 1500 ambulatory patients have been treated during this period, and hypernatremia has not been encountered. In addition, one of us (C.M.) has been using this solution for the treatment of diarrhea in a busy office practice in a middle-class population in Arizona. Over 100 patients have been treated, without complications. Furthermore, we are conducting prospective studies on the use of the WHO-recommended oral rehydration solution in hospitalized and ambulatory children in Baltimore. Hypernatremia has not been noted in any of these studies.

We agree with Dr. Walker that the two commonly used commercial solutions, Pedialyte (Ross Laboratories) and Lytren (Mead Johnson), are not ideal for management of acute diarrhea. However, the most common complication from these solutions is hyponatremia, not hypernatremia.⁵ These solutions may also induce an osmotic diarrhea⁶ because of their high carbohydrate content (5 per cent in Pedialyte and 7 per cent in Lytren).

We think that using solutions containing less than 17 mmol of sodium per liter in patients with diarrhea requiring hydration would be inappropriate and could lead to hyponatremia. On the basis of our experience and that of others all over the world, we believe that the solution recommended by the WHO can be used safely in a variety of clinical situations in the United States and in other countries.

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EFFECTS OF γ -VINYL GABA

To the Editor: Pharmacologic measures presumed to augment central-nervous-system γ -aminobutyric acid (GABA)-dependent function can reduce neuroleptic-induced tardive dyskinesia. Thus, muscimol, a GABA-receptor agonist, improves involuntary movements.¹ Unfortunately, this agent is too toxic for therapeutic use. Likewise, oral administration of an irreversible inhibitor of GABA-transaminase, γ -acetylenic GABA, suppresses tardive dyskinesia but is not without side effects.² γ -Vinyl GABA, another irreversible GABA-transaminase inhibitor,³ is less toxic than γ -acetylenic GABA in laboratory animals,⁴ and if given to patients in oral doses of 1 to 6 g per day, it causes dose-dependent increases in GABA concentrations in the spinal fluid.⁵

Nine consenting hospitalized patients with tardive dyskinesia were given multiple, increasing oral doses of γ -vinyl GABA in a single-blind, placebo-controlled study. Treatment with γ -vinyl GABA was preceded and followed by placebo periods. Doses were increased from 2 to 4 g per day, and in some cases to 6 g per day, approximately every two weeks, depending on individual tolerance. Each patient's neuroleptic regimen was kept constant throughout the study. All patients were evaluated weekly for abnormal movements. Hyperkinesia and parkinsonism were scored during direct observation, according to Gerlach's tardive dyskinesia scale.⁶

As shown in Figure 1, hyperkinesia was reduced in seven patients by doses of 2 to 6 g per day. In five of these patients, reinstatement of placebo returned hyperkinetic movements to pretreatment levels. During treatment, one patient had complete disappearance of her relatively severe dyskinetic movements, and the improvement persisted after cessation of therapy. In two subjects, both of whom had senile dementia, treatment with γ -vinyl GABA was associated with an aggravation of dyskinesia. Signs of parkinsonism were unchanged in six patients during treatment; in others, signs were decreased, aggravated, or transiently increased and then decreased. The treatment was clinically well tolerated. Sedation was the most prominent side effect but required interruption of